STATE ROUTE 505 TRANSPORTATION CONCEPT REPORT

Caltrans
District 3

April 1998

INTERSTATE 505

TRANSPORTATION CONCEPT REPORT

BY
CALTRANS
District 3

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APPROVAL RECOMMENDED:

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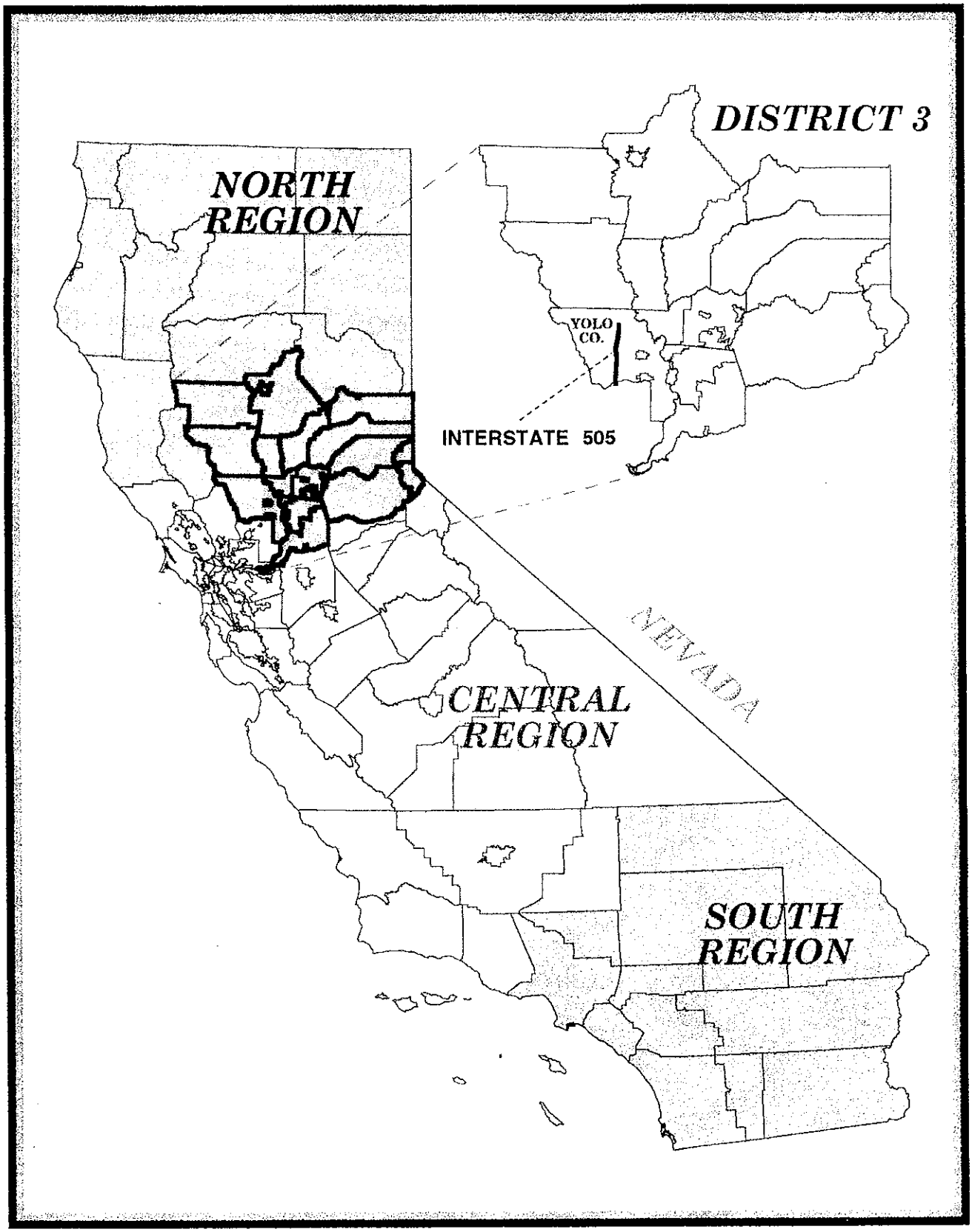
INTERSTATE 505
LOCATION MAP



INTERSTATE 505
TRANSPORTATION CONCEPT REPORT SUMMARY

Table 1- Concept Summary

Segment/ County	Post Kilometer	Postmile	Current Facility	Current LOS	Concept Facility	Concept LOS	Ultimate Transportation Corridor
YOL - 1	0.000/35.971	0.000/22.356	4-lane Freeway	B	4-lane Freeway	D	4-lane Freeway ❶

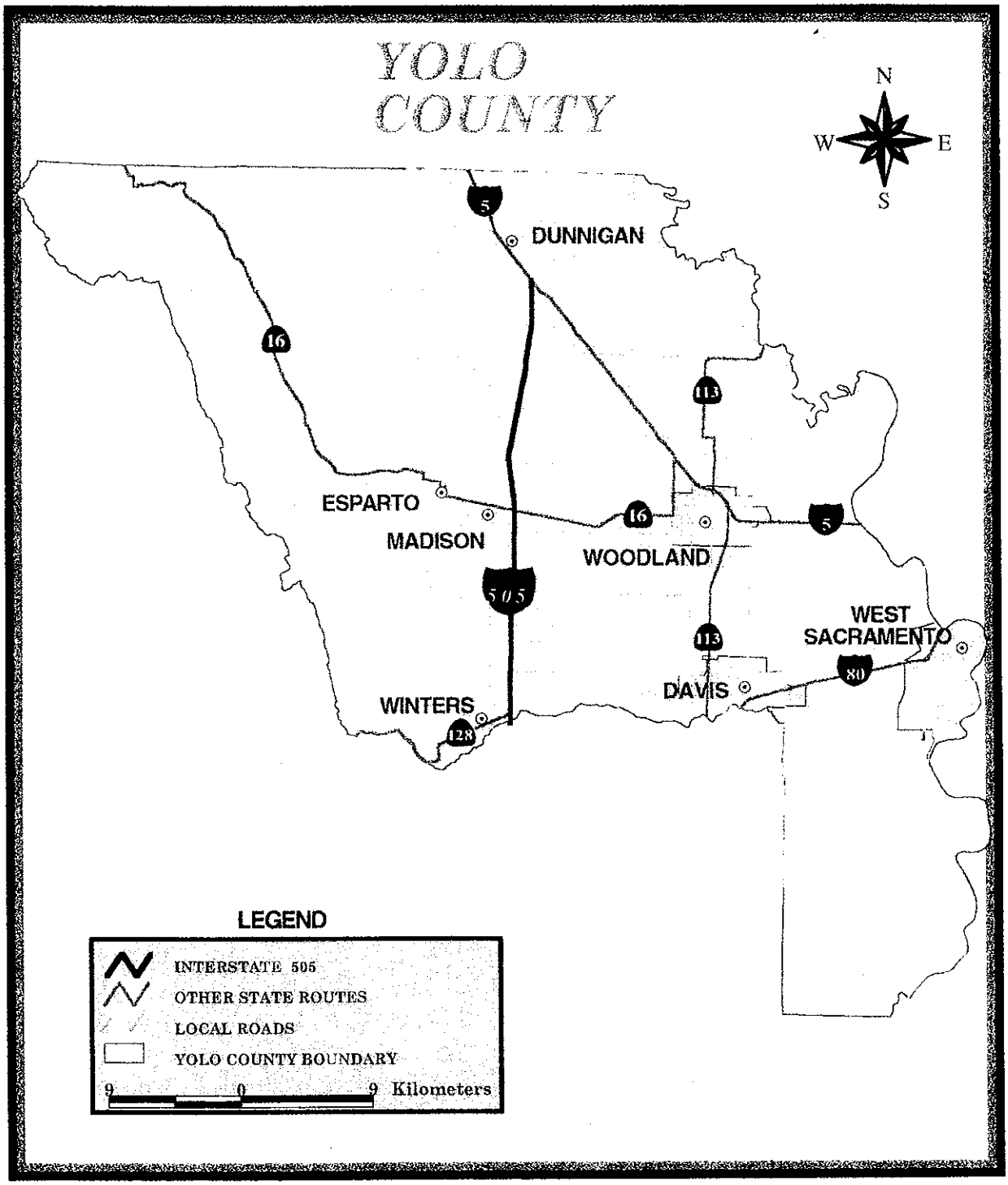
❶ I-505 currently has sufficient capacity to accommodate the 20 to 30 year future travel demand estimates. Right of way is available in the median to accommodate additional lanes if needed.

Transportation Concept Rationale

The route concept rationale is based on the importance of I-505 as a major link to interregional travel connecting the Bay Area traffic on I-80 to points north on I-5 along the Pacific Northwest. The slow pace of development occurring along the corridor and relatively low forecasted future traffic demand for the next 20 to 30 years also plays an integral role in the development of the route concept.

Currently operating at LOS B during peak periods, the level of service is not expected to drop below LOS C over the next 20-years. The concept level of service will remain LOS "D", which is the standard for interstate routes in rural areas. Based on excess capacity of the facility and future development considerations, no capacity increasing improvements should be needed within the 20-year planning period. Safety and rehabilitation improvements along with normal maintenance will occur as needed.

INTERSTATE 505
SEGMENT MAP



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INTRODUCTION

BACKGROUND:

The Transportation Concept Report (TCR) is a Caltrans long-term planning document that evaluates the conditions of a given state transportation corridor, and establishes a 20-year planning concept. In addition to the 20-year concept, the TCR also looks at the ultimate transportation concept which examines the corridor needs beyond the 20-year planning period. Forecasting beyond a 20-year period is difficult for several reasons, i.e., unknown changes in future land use zoning (beyond 20-year general plan buildout) and unknown funding constraints. Therefore, any concept identified for the "Ultimate" period, must be considered somewhat speculative and should be used cautiously.

As part of route concept development, the TCR documents the planning strategies of the long range plans identified by the Regional Transportation Planning Agencies and Metropolitan Transportation Organizations within a given state highway corridor. As state highways often pass through several regional planning agency jurisdictions, the TCR assimilates the regional strategies and consolidates these strategies into one corridor specific document.

FORMAT:

The format for the TCR has changed from its previous fully narrative report format to a more concise database oriented format. This new format was designed to streamline information and to better provide a usable, up-to-date platform allowing for easy computerized access to Caltrans District 3 System Planning information. When completed, the Fact Sheet database will be made available to our transportation planning partners via the Internet.

Included in this format is the California Natural Diversity Database (CNDDBS) information which identifies the status of habitats and species found within 300 meters of centerline of the existing highway facility. This CNDDBS information does not represent all environmental constraints within a given corridor. A complete assessment of environmental constraints can only be determined through a detailed environmental study, such as an Environmental Impact Report or Statement.

INTERSTATE 505 SEGMENT FACT SHEET

SEGMENT: YOL 1

SOLANO/YOLO COUNTY LINE TO I-5

PKm Ahead: 0.000 PKm Back: 35.971
Ahead PM: 0.000 Back PM: 22.356
Distance: Kilometers: 35.971 Miles: 22.356

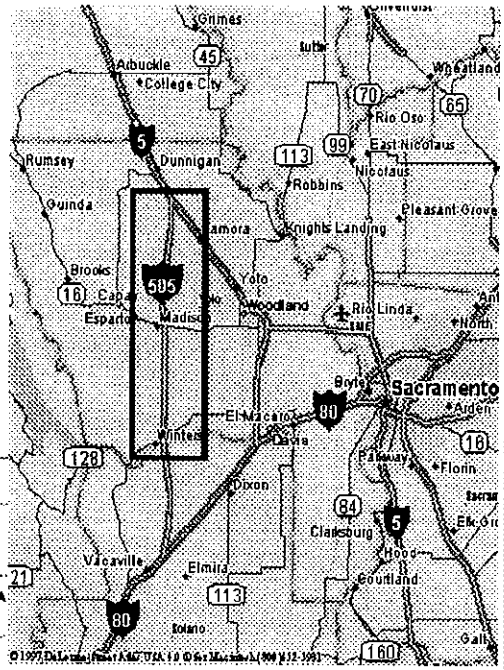
Present Facility Four Lane Divided Freeway (Full Control)

Concept Facility Four Lane Divided Freeway (Full Control)

Ultimate Facility Four Lane Divided Freeway (Full Control)

Transportation Concept
Route Concept Improvements

- Safety and rehabilitation improvements along with normal maintenance and rehabilitation will occur as needed.



Levels of Service

Present LOS	B
20-Year LOS No Build	C
20-Year Concept LOS (Improved):	D

Local/Regional LOS Standards

CMP LOS Standard: Not Applicable N/A

Gen Plan Standard: Yolo County General Plan E

CLASSIFICATION AND SYSTEM DESIGNATIONS

Functional Classification: Rural Principal Arterial

NHS	1	0= Non NHS, 1= Interstate, 2= High Priority Route, 3 & 4 STRAHNET, 5= Other NHS, 6= High Priority & STRAHNET, 7= NHS Connector	FREEWAY EXPRESSWAY	1	0= Non F&E, 1= F&E, 2= F&E Unconstructed
SCENIC	1	0=Non Scenic, 1 =Officially Designated, 2= Eligible	NAT'L TRUCK NETWORK	1	0=Non NTN, 1 =NTN STAA Trucks, 2= Terminal Access, Rte.
LIFE LINE	0	0=Non Life Line, 1=Life Line Route	IRRS	1	0=Non IRRS, 1 =IRRS, 2= IRRS Unconst, 3=Non IRRS, unconst

DESCRIPTION - RATIONALE - GENERAL COMMENTS

Interstate 505 (I-505) is a south to north four-lane divided interstate freeway serving as a major link for goods movement and interregional travel between I-80 near Vacaville (San Francisco Bay Area and the Northern Sacramento Valley travel) and I-5 to areas along the Pacific Northwest. In District 3, I-505 begins at the Solano/Yolo County Line, passes near the towns of Winters and Madison, and terminates at I-5 near Dunnigan. The route serves primarily interregional travel with a high percentage of truck traffic, 27%. Commute and local trips account for a smaller share of travel on this route.

The facility is currently operating at LOS "B", during peak periods, with an average annual daily traffic (AADT) volume of 12,600. The level of service is expected to drop to "C" by the end of the 20-year period with a projected AADT of 22,600. The existing I-505 facility is constructed with sufficient capacity to accommodate travel demand throughout the 20-year planning period. Currently there is sufficient right-of-way available to expand the I-505 to six lanes in the future. However, the excess capacity of the facility and the slow pace in which development is occurring, we do not anticipate the need for further expansion for at least 20 to 30 years. Transportation concept level of service is designated LOS "D", the standard for interstate routes in rural areas.

Projects Programmed (RTIP/STIP/SHOPP)
Projects Listed in Local Long-Range Planning Documents

Yolo County CMP Widen the Grant Ave/I-505 overcrossing to 4 lanes, signalize the I-505 offramp.

1998 STIP No projects identified

1998 SHOPP No projects identified

LOCAL PLANNING JURISDICTIONS

RTPA/ MPO Sacramento Area Council of Governments
3000 S Street, STE 300,
SAC, CA 95816, (916) 457-2264

AIR QUALITY DISTRICT Yolo/Solano Air Pollution Control District.
1947 Galielo Ct. #103, DAVIS, CA 95616
LARRY GREEN 757-3650

AIR QUALITY

The following information is a brief overview only. For specific environmental information, contact the Caltrans District 3 Environmental Offices.

AIR BASIN: Sacramento Valley Air Basin

AIR QUALITY NON-ATTAINMENT DESIGNATIONS:

CO	Non-attainment	**OZONE**	Non-attainment	**PM10**	Non-attainment

LAND USE

According to the 1983 Yolo County General Plan, land use along this corridor is primarily zoned agricultural. With the exception of moderate growth in the Winters area, agricultural zoning is expected to continue as throughout the 20-year planning. The City of Davis General Plan has also been reviewed for specific local land use decisions that may result in future impacts to I-505. No long-range impacts to I-505 were identified.

MODAL OPTIONS

UNITRANS (916) 752-2877
Operates ADA-accessible local bus service throughout the City of Davis. FREQUENCY: Varies with the University of California-Davis academic calendar. Generally operates 30-minute service, October through June; and hourly during other periods. HOURS: (October-June) Monday-Thursday; 7am -11:30pm and Friday, 7am -6:10pm. The fare is $.50 for a single ride and transfers are free. Service connections with Yolobus (to Woodland, West Sacramento, and downtown Sacramento) and City Link (to Fairfield, Vacaville, and Dixon) are available at campus terminals.

YOLOBUS (916)371-2877
Operates ADA-accessible local and express bus service between Woodland, Davis, Winters, West Sacramento and downtown Sacramento. Also operates service in western Yolo County. HOURS: Monday-Friday, 6:30am -10:25pm; Saturday, Sunday and holidays, 7am-8pm.

Yolobus is a public bus system funded by the cities of Davis, West Sacramento, Winters, Woodland and the County of Yolo. Yolobus serves Davis, West Sacramento, Winters, Woodland, Old Sacramento, and downtown Sacramento. Yolobus connects with Regional Transit in Sacramento and Unitrans in Davis.

AMTRAK (800) 872-7245
Daily ADA-accessible scheduled passenger train service from Davis and Sacramento to Richmond-BART-Oakland-San Francisco-San Jose, the San Joaquin Valley, Los Angeles/Southern California and Portland-Seattle. Reno-Denver-Chicago service also available. Connections to points throughout the US and Canada.

GREYHOUND (800) 231-2222
Daily scheduled bus service from Sacramento and Davis to Oakland-San Francisco, the San Joaquin Valley, Los Angeles, Portland-Seattle, Reno-Denver-Chicago and other points throughout the US, Canada and Mexico.

PLANNING DOCUMENTS-SPECIAL STUDIES & REPORTS

SACRAMENTO AREA COUNCIL OF GOVERNMENTS (SACOG) 1995 REGIONAL HOUSING, POPULATION & EMPLOYMENT PROJECTIONS (FEBRUARY 1996)

SACOG METROPOLITAN TRANSPORTATION PLAN (MTP) (AUGUST 1996)

YOLO COUNTY GENERAL PLAN - 1983

TRAFFIC ANALYSIS AND HIGHWAY INFORMATION

TRAFFIC FORECASTS

YEAR	AADT	PEAK HOURLY VOLUMES	V/C RATIO	LOS	TRAFFIC ANALYSIS COMMENTS
1995	12,600	1,550	.21	B	
2005	17,700	2,180	.30	B	
2015	22,700	2,800	0.42	C	

% TRAFFIC GROWTH/YR	2%	EXISTING LND USE	AGR	PEAK PERIOD DIR SPLIT	52%
TERRAIN	FLAT	FUTURE 20-YEAR LAND USE	AGR	PEAK PERIOD TRUCK %	6%
TOTAL ACCIDENT RATE VS STATEWIDE AVG.	47%	FATALITIES + INJURIES ACC RATE VS STATEWIDE AVG	43%	DAILY TRUCK %	28%

AVAILABLE RIGHT OF WAY INFORMATION

AVERAGE MEDIAN WIDTH: 19.54 METERS AVERAGE LANE WIDTHS: 3.66 METERS AVERAGE SHOULDER WIDTHS: 3.05 METERS NO. LANES 4

RW COMMENTS GENERAL:

USING A WEIGHTED AVERAGE, MEDIAN WIDTHS ARE APPROXIMATELY 19.54 METERS WIDE (64.1 FEET). FROM THE LONG CREEK BRIDGE, MEDIAN WIDTHS EXPAND TO 21.43 METERS (70 FEET) GOING TO 30.19 (99 FEET) THE LAST .03 METERS

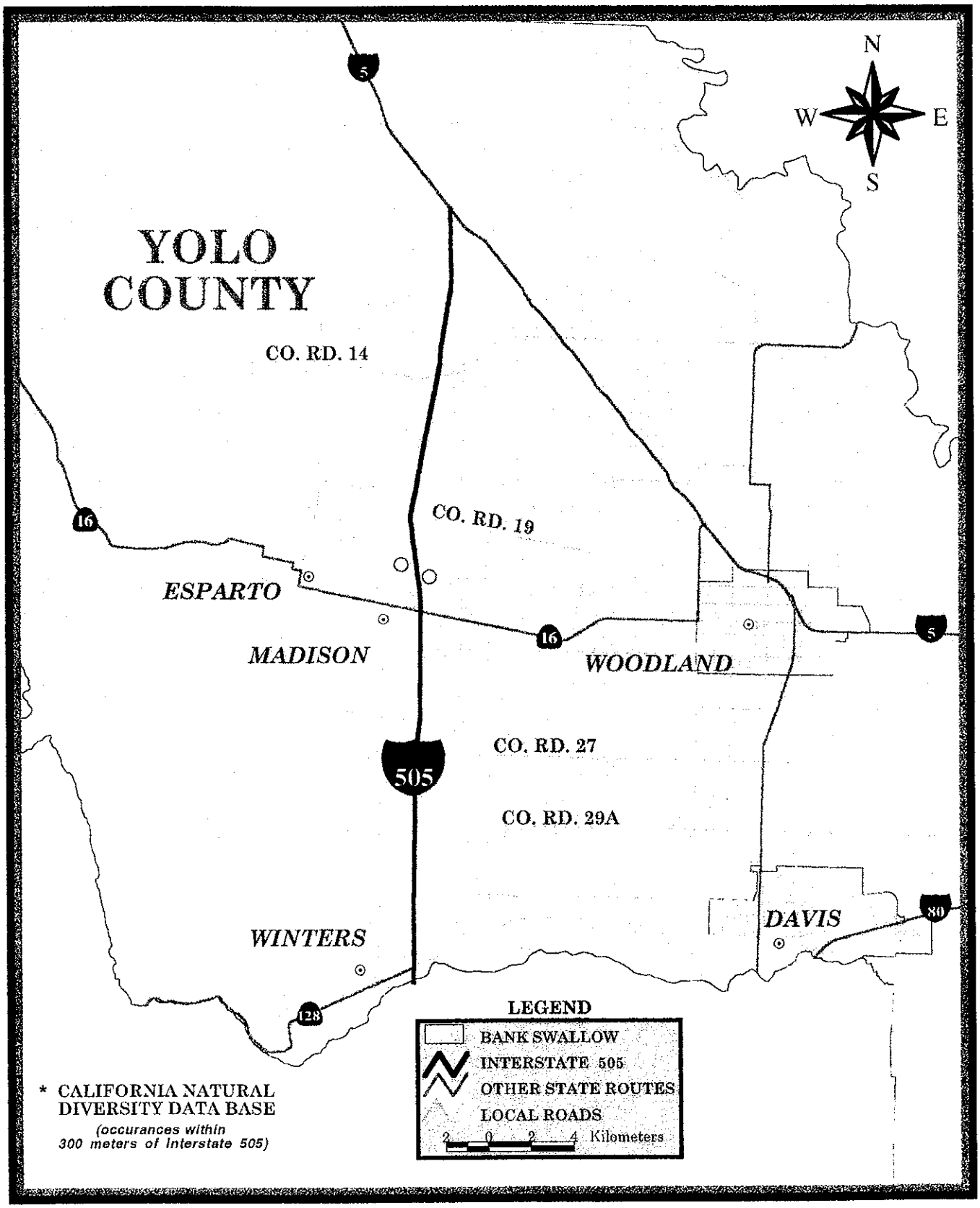
CALIFORNIA NATURAL DIVERSITY DATABASE INFORMATION (CNDDBS)

The following pages identify, by segment, the special status of habitats and species found within 300 meters of the centerline of the state highway.

Please Note:

This CNDDBS information does not represent all environmental constraints within a given corridor. A complete assessment of environmental constraints can only be determined through a detailed environmental study, such as an Environmental Impact Report or Statement.

INTERSTATE 505
CNDDB* RECORD



GLOSSARY AND DEFINITION OF TERMS

Glossary of Terms and Definitions

Additional Traffic Information	Various factors and characteristics of the route pertinent to the traffic forecasting analysis.
Air Quality Non-Attainment	Identifies non-attainment status for CO, Ozone and PM10 within the subject air basin.
Available Right of Way Information	Briefly describes available right of way characteristics, i.e., shoulder widths, lane widths, median widths etc. in metric measurements. More complete right of way information will be made available in the coming year.
Concept Facility	Highway facility type and characteristics considered viable with or without improvement within the 20-year planning period given financial, environmental, planning and engineering factors.
Concept LOS	Highest and best level of service that can be attained in the 20-year planning period based on the Concept Facility. The urban standard is "E" and the rural standard is "D".
Functional Classification	Guided by federal legislation, refers to a process by which streets and highways are grouped into classes or systems, according to the character of the service that is provided, i.e., Principal Arterials, Minor Arterial Roads, Collector Roads, Local Roads.
Local and Regional LOS Standards	Identifies the level of service standards set by local and regional jurisdictions in general plans and congestion management programs.
Natural Diversities Information	Identifies special status of habitats and species found within 300 meters of centerline of the existing highway facility.
Present Facility	Highway type and general characteristics at the time of this study.
Present LOS	Existing level of service. LOS: A qualitative rating of the effectiveness of a transportation system in serving travel. Letter's A (best) through F (worst).

Glossary Of Terms And Definitions (Continued)

Project Programming	Process of scheduling high priority capital outlay projects for development and implementation. Programming documents include Regional and Metropolitan Transportation Plans, Regional, State and Federal Improvement Plans (RTIP, STIP, FTIP,) etc.
Route Designations	Identifies whether or not the subject segment of a route is designated as being part of a system. National Highway System (NHS), Interregional Highway System (IRRS), Freeway/Expressway System, Scenic Highway, National Truck Network, Terminal Access Route for the National Truck Network, Strategic Highway Network (STRAHNET), Highways of Regional Significance.
Traffic Forecasts	Traffic calculation results for years 1996, 2006, and 2016 for the segment. Includes Average Annual Daily Traffic (AADT), Peak Hour Travel Volumes, Volume to Capacity (V/C)Ratios, and Levels of Service (LOS). Highway Capacity Manual methodology.
Transportation Demand Management (TDM)	"Demand-based" techniques for reducing traffic congestion, such as ridesharing programs and flexible work schedules enabling employees to commute to and from work outside of peak hours.
Transportation System Management (TSM)	(1) A process oriented approach to solving transportation problems considering both long and short range implications; (2) A services and operations oriented process in which low capital, environmentally responsive, efficiency maximizing improvements are implemented on existing facilities.